

The Role of Financial Development in Globalization: Evidence from a Global Panel

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Submitted to the
Institute of Graduate Studies and Research
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy
in
Finance

Eastern Mediterranean University
September 2019
Gazimağusa, North Cyprus

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ABSTRACT

The present thesis examines the role of financial development in globalization using the global panel dataset. Annual data that ranges from 1980 to 2014 has been used for selected 181 countries. Panel econometric procedures generally reveal that financial markets have a positive impact on economic, political, and social globalization as proposed by the KOF classification criteria. However, when macroeconomic fundamentals such as national income, inflation, capital, and population growth are taken into consideration this effect sometimes becomes negative depending on the type of macroeconomic factor and methodology used. This study concludes at the end that financial development is significant driver for globalization all around the world.

Keywords: Financial Development, Globalization, Panel Data

ÖZ

Bu tez, global panel veri kümesini kullanarak küreselleşmedeki finansal gelişimin rolünü inceler. 1980 ile 2014 arasında değişen yıllık veriler, seçilen 181 ülke için kullanılmıştır. Panel ekonometrik prosedürler genellikle finansal piyasaların KOF sınıflandırma kriterleri tarafından önerildiği gibi; ekonomik, politik ve sosyal küreselleşme üzerinde olumlu bir etkiye sahip olduğunu ortaya koymaktadır. Bununla birlikte, milli gelir, enflasyon, sermaye ve nüfus artışı gibi makroekonomik temeller dikkate alındığında, bu etki bazen kullanılan makroekonomik faktör ve metodolojinin türüne bağlı olarak negatif hale gelebilir. Bu çalışma, finansal gelişmenin tüm dünyada küreselleşme için önemli bir itici güç olduğu sonucuna varmıştır.

Anahtar Kelimeler: Finansal Gelişme, Küreselleşme, Panel Veri

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LIST OF ABBREVIATIONS

CPI	Consumer Price Index
DOLS	Dynamic Ordinary Least Squares
FD	Financial Development Index
FI	Financial Institutions Index
FIA	Financial Institutions Access Index
FID	Financial Institutions Depth Index
FIE	Financial Institutions Efficiency
FM	Financial Markets Index
FMA	Financial Market Access Index
FMD	Financial Market Depth Index
FME	Financial Market Efficiency Index
FMOLS	Fully Modified Ordinary Least Squares
GCF	Gross Capital Formation
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GLO	Globalization
GLOE	Economic Globalization
GLOP	Political Globalization
GLOS	Social Globalization
GMM	Generalized Method of Moments
POP	Overall Population
RINT	Real Interest Rate

Chapter 1

INTRODUCTION

Financial development has been investigated as a source of economic growth in the literature studies apart from pioneering study of Patrick (1966). It is sufficiently and well documented that financial sector is a significant contributor to real income growth of economies. Patrick (1966) proposed two pioneering hypotheses in order to examine the role of financial markets in the macro economies: (1) the *supply-leading* hypothesis and (2) the *demand-following* hypothesis. In the case of the “supply-leading” hypothesis, financial expansion precedes significant growth in real income whereas in the case of the “demand-following” hypothesis, real income growth precedes significant growth in financial volume. Although many studies confirmed the “supply-leading” hypothesis for many countries, there are considerable number of studies which confirmed the second hypothesis that it is financial sector which is driven by economic growth (Jenkins & Katircioglu, 2010; Soukhakian, 2007a; 2007b). As financial development enhances income and economic growth, not only it impacts on economic sectors (Katircioglu et al., 2007; Soukhakian, 2007a; 2007b), but external and internal economic/non-economic factors impact on financial markets. Studies have shown that social, economic, and political factors exert significant effects on financial market activities; thus, this in turn affects macro economies (Guris et al., 2015; Neves et al., 2015; Wardhono et al., 2014; Barisik and Tay, 2010).

Globalization has been shown as a significant driving factor behind macroeconomic activities as it plays a major role that enables local economies and their economic sectors to integrate with the rest of the world markets (Javid & Katircioglu, 2017). Waters (1995) and Friedman (1999) argue that globalization not only integrates markets and societies but also reduces geographical restrictions while Albrow (1996) argues that it increases the flow of people, ideas, and technologies and alters societies' economic, political, and cultural infrastructure. But, as Javid & Katircioglu (2017) mention globalization make local economies more vulnerable to external political and economic shocks or crises. Recent studies find that economic sectors or aggregates contribute to globalization significantly. For example, Fereidouni et al. (2014) support the view that tourism development as services trade promotes globalization.

On the other hand, globalization has been linked to financial markets in the relevant literature as well. Mishkin (2007) argues that developing countries gain higher share in international financial markets due to a reason that industrialized economies with developed financial systems open their markets to developing countries as well. Furthermore, Mishkin (2009) points out that globalization leads to financial development due to the fact that globalization stimulates institutional reforms in developing countries. Some studies find positively significant effects of globalization on financial markets (Falahaty & Law, 2012; Garcia, 2012; Law et al., 2015) while some others find negatively significant effects (Shahbaz et al, 2018). In their study, Shahbaz (2018) argue that globalization might be detrimental to financial development unlike that argument by Mishkin (2009) due to a reason that institutional quality might not be well designed with transparent norms and rules. Thus, this new debate is still open to further investigation and researches.

Therefore, against this backdrop in the case of interactions between globalization and financial sectors, this study aims to search for the role of economic, political, and social globalization on the global financial markets using global panel data of 181 countries. The contribution of this study is that the globalization-financial markets nexus will be studied under a global panel unlike previous studies which focused on the regional or country specific datasets. Furthermore, this research study will investigate the influence of financial development indexes on the economic, social and political globalization categories of the selected economies.

Chapter 2

LITERATURE REVIEW

2.1 Financial Development and Growth

The financial sector impact on economic growth has been debated among economists for an extensive time. As past studies as J. A. Schumpeter (1911), Goldsmith (1969), Shaw (1973), and McKinnon (1973) portrayed a positive impact of a countries' developing financial sector on the economic growth. Modern theoretical and empirical financial literature claimed that financial development is one of the fostering channels of the improvement of economic growth among countries.

Two major measurements of recent empirical literature appraise financial development by two major methods: Demand-following and supply-leading hypotheses were developed by Patrick (1966) in order to examine the directions of causality among financial development and economic growth. Supply-leading hypothesis theorizes increasing the number of financial institutions and markets will enhance the economic growth. Studies by McKinnon (1973), King and Levine (1993), Neusser and Kugler (1998), and Levine et al. (2000) supported this hypothesis. Inversely, demand-following hypothesis supports the idea of rising demand for financial services can prompt the development in financial sector following the growth in economy. Gurley and Shaw (1967), Goldsmith (1969), and Jung (1986) had broad studies supporting indicated hypothesis. Rajan and Zingales

(1998) in their industry-level study used both methods and proved that financial development facilitates economic growth.

In evaluation of 69 less-developed countries (Borensztein, et al. 1998) found out that FDI has supporting effect on economic growth. In addition, Iamsiraroj (2015) depicted two-way significant relationship between FDI and growth in 124 cross-country study.

Balasubramanyam, et al. (1996) found that in export promoting developing countries FDI has a positive effect on economic growth, while it is negative in the import oriented countries.

At the contrast Arcand, et al. (2015) showed that there is no more a positive effect by financial development on economic growth. In addition, De Gregorio and Guidotti (1995) found out that there is a significant negative relationship between financial development and economic growth for countries facing high-inflation problem.

2.2 Globalization and Economic Growth

Globalization is abolition of national boundaries, integration of local economies while producing compound relationships of common interdependencies (Norris, 2000). Clark (2000) has defined globalization as the case of multi-continental networks including people, conceptual concepts and wealth. Nicolescu (2015) stated globalization as “global village” moving into a sole economic system. According to IMF globalization is growth of the economies through financial flows and trade which establish through movement of capital and people across international borders. (IMF, 2000).

Yet, there is no commonly accepted definition of globalization (Dreher, et al. 2008). Kacowicz (1999), Keohane and Nye (2000) and Park (2003) emphasized that globalization cannot be measured as a single process but rather it is a complex method.

A. Dreher (2006) developed three major indexes analyzing globalization: economic, social and political integration. The study applied panel data for 123 countries between years 1970 and 2000. The indexes measure each dimension affecting economic growth. The study depicts that globalization has a positive effect on economic growth.

Trade openness and economic growth has been found positively related (Sachs and Warner (1995), Greenaway et al. (1999), Dollar and Kraay (2004), Katircioglu, et al. (2007) Chang, et al. (2009), Kim and Lin (2009), Rao, et al. (2011), Zeren and Ari (2013), Jouini (2015)). In addition, Mishkin (2009) suggested that economic globalization, expressed in institutional capital inflows and international trade, is an important instrument for financial development and hence economic growth. This view supported Rajan and Zingales's (2003) hypothesis of correlation between trade openness and globalization which resulted in financial development.

Current empirical literature illustrates that globalization is not always beneficiary for growth. Studies by Rao et al. (2011) and Herzer (2013) showed that trade openness has a positive impact for developed economies while, adverse effect for developing countries.

On the other side, Carkovic and Levine (2005), Edison et al. (2002), Musila and Yiheyis (2015) did not find a significant influence of FDI in economic growth. While, Trejos and Barboza (2015) revealed that trade openness cannot be the main force of economic growth. Moreover, only trade openness is not enough to boost growth (Ulasan, 2015). In contrast Feridun (2006) found an inverse relationship between globalization and growth for Nigeria.

2.3 Financial Development and Globalization

Mishkin (2007) hypothesized the influence of globalization on financial development. Industrialized economies with improved their financial systems opened their markets to developing countries. This contingency encouraged developing countries to take more share in international financial markets and hence empowered economic growth.

Falahaty and Law (2012) also found a positive association between globalization and financial development in their empirical study for MENA countries.

Similarly, Garcia (2012) tested the effect of globalization on financial development. In the study of 26 transition countries the results revealed that financial globalization has a positive impact on countries' financial system.

Also, Law et. al (2015) exposed that globalization has a positive impact on banking sector in East Asian countries. By institutional reforms result can cause a financial development in those economies.

In single country study, Shahbaz, et al. (2018) found a negative significant relationship between economic growth and financial development in India. Similarly,

negative relationship portrayed between globalization and financial development in Nigeria by Feridun (2006).

Chapter 3

THE ROLE OF FINANCIAL DEVELOPMENT IN GLOBALIZATION

3.1 Introduction

As financial development enhances income and economic growth, not only it impacts on economic sectors (Katircioglu et al., 2007; Soukhakian, 2007a; 2007b), but external and internal economic/non-economic factors impact on financial markets. Studies have shown that social, economic, and political factors exert significant effects on financial market activities; thus, this in turn affects macro economies (Guris et al., 2015; Neves et al., 2015; Wardhono et al., 2014; Barisik and Tay, 2010).

On the other hand, globalization has been shown as a significant driving factor behind macroeconomic activities as it plays a major role that enables local economies and their economic sectors to integrate with the rest of the world markets (Javid & Katircioglu, 2017). Waters (1995) and Friedman (1999) argue that globalization not only integrates markets and societies but also reduces geographical restrictions while Albrow (1996) argues that it increases the flow of people, ideas, and technologies and alters societies' economic, political, and cultural infrastructure. But, as Javid & Katircioglu (2017) mention globalization make local economies more vulnerable to external political and economic shocks or crises. Recent studies find that economic sectors or aggregates contribute to globalization significantly. For

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On the other hand, globalization has been linked to financial markets in the relevant literature as well. Mishkin (2007) argues that developing countries gain higher share in international financial markets due to a reason that industrialized economies with developed financial systems open their markets to developing countries as well. Furthermore, Mishkin (2009) points out that globalization leads to financial development due to the fact that globalization stimulates institutional reforms in developing countries. Some studies find positively significant effects of globalization on financial markets (Falahaty & Law, 2012; Garcia, 2012; Law et al., 2015) while some others find negatively significant effects (Shahbaz et al, 2018). In their study, Shahbaz (2018) argue that globalization might be detrimental to financial development unlike that argument by Mishkin (2009) due to a reason that institutional quality might not be well designed with transparent norms and rules. Thus, this new debate is still open to further investigation and researches.

Therefore, against this backdrop in the case of interactions between globalization and financial sectors, this study aims to search for the role of economic, political, and social globalization on the global financial markets using global panel data of 181 countries. The contribution of this study is that the globalization-financial markets nexus will be studied under a global panel unlike previous studies which focused on the regional or country specific datasets. Furthermore, this research study will investigate the influence of financial development indexes on the economic, social and political globalization categories of the selected economies.

3.2 Data and Methodology

3.2.1 Modelling and Data

The current study examines the role of financial sector development on economic globalization (GLOE), political globalization (GLOP) and social globalization (GLOS). Argument in this study is that financial markets significantly contribute to changes in globalization trends around the globe. Thus, the following functional relationship is proposed in this study:

$$GLO_i = f(FD_i, CV_i) \quad (1)$$

where in equation (1) GLO stands for globalization proxy which is considered in three different forms: Economic Globalization (GLOE), Political Globalization (GLOP) and Social Globalization (GLOS). Secondly, FD stands for financial development proxy which are measured under nine different indices: financial institutions access index (FIA), financial institutions depth (FID) index, financial institutions efficiency (FIE) index, financial institutions (FI) index, financial market access (FMA) index, financial market depth (FMD) index, financial market efficiency (FME) index, and financial markets (FM) index.

Thirdly, CV in equation (1) stands for control variables which are added to the main model and a total of six control variables have been proposed in this study with this respect: Gross domestic product (constant 2010, US\$) (GDP), gross fixed capital formation (constant 2010, US\$) (GFCF), gross capital formation (constant 2010, US\$) (GCF), consumer price index (2010 = 100) (CPI), overall population (POP) and real interest rate (RINT).

Equation (1) is then written in the following regression form with double logarithmic specification in order to assess growth effects of financial indicators on globalization trends in the economic long-term (Katircioglu, 2010):

$$\ln GLO_i = \beta_0 + \beta_1 \ln FD_i + \beta_2 \ln CV_i + \varepsilon_i \quad (2)$$

where at period t , $\ln GLO$ is the natural logarithmic form of economic, political and social globalization index panels. $\ln FD$ is natural logarithmic form of nine financial development indices, $\ln CV$ is natural logarithmic form of six control variables. Real interest rates were not transformed into logarithmic form and used in absolute terms owing to negative values.

Global panel data that range from 1980 to 2014 which was based on data availability has been constructed in this study. Firstly, a multivariate index of globalization “The KOF Globalization Index” has been gathered for this study. It was initially developed by Dreher (2006) and then revised by Dreher (2008). Swiss Economic Institute – Konjunkturforschungsstelle - provides data for KOF globalization index and its subcategories¹. It comprises an enormous panel dataset that contains data from 203 countries and it ranges from 1970 to 2016. Appendix Table 1 presents a detailed description of these three globalization indices as they are also available in Dreher (2008, 2006). Secondly, financial development index pyramid consists of nine financial indices on a global scale. The data presents two principal categories as financial institutions index (FI) and financial markets index (FM). Each principal category is subcategorized as financial depth, financial access and financial efficiency. The indices were prepared and reported by the IMF (Čihák et al. 2012) as presented in Figure 1.

¹ The KOF Globalization Index is available at: <http://www.kof.ethz.ch/globalisation/>.

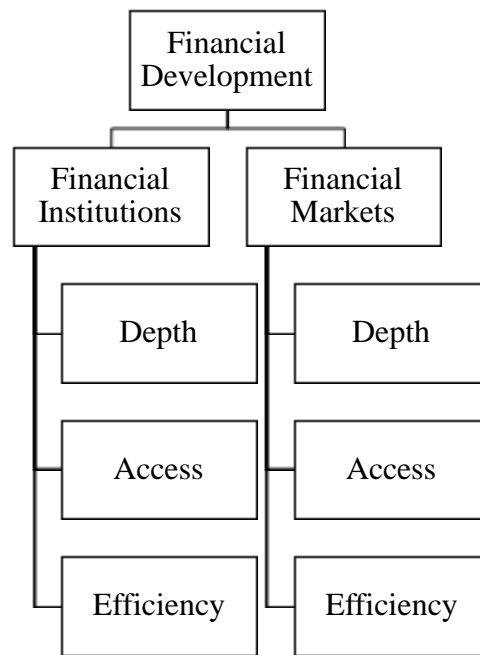


Figure 1: Financial Development Index Pyramid²

Thirdly, Gross domestic product (constant 2010, US\$) (GDP), gross fixed capital formation (constant 2010, US\$) (GFCF), gross capital formation (constant 2010, US\$) (GCF), consumer price index (2010 = 100) (CPI), overall population (POP) and real interest rate (RINT) have been used as control variables (CV) in this study. These variables were obtained from World Bank (2019). All the variables except real interest rate transformed in logarithmic forms in order to estimate growth effects as mentioned previously. Before starting empirical analysis, it would be good to look at descriptive statistics and correlation matrix of the panels as presented in Tables 1 & 2 respectively.

² Source: IMF, based on Čihák, et al. (2012)

Table 1: Descriptive Statistics

Variables	Mean	Median	Max	Min	Std. Dev.	Skewness	Kurtosis	J-B
GLOE	52.778	51.900	99.000	7.670	19.249	0.114	2.400	90.300*
GLOP	53.793	52.610	98.410	1.270	24.572	0.006	1.984	259.840*
GLOS	42.392	39.270	93.480	3.040	22.062	0.470	2.237	367.380*
FD	0.267	0.197	1.000	0.000	0.204	1.299	4.016	1880.180*
FIA	0.287	0.206	1.000	0.002	0.269	0.984	2.970	919.880*
FID	0.225	0.132	1.000	0.001	0.230	1.490	4.438	2618.580*
FIE	0.575	0.601	1.000	0.025	0.168	-0.591	3.063	335.740*
FI	0.364	0.298	1.000	0.017	0.213	0.915	3.024	806.130*
FMA	0.268	0.178	1.000	0.000	0.271	0.911	2.877	500.580*
FMD	0.177	0.069	1.000	0.000	0.233	1.754	5.350	3806.120*
FME	0.289	0.135	1.000	0.000	0.322	1.111	2.902	737.740*
FM	0.189	0.081	1.000	0.000	0.228	1.388	4.108	1916.450*
GDP	279,789 ⁱ	16,659 ⁱ	16,177,455 ⁱ	71.13 ⁱ	1,092,087 ⁱ	8.815	99.303	2,288,054*
GFCF	55,890 ⁱ	1,542 ⁱ	3,810,202 ⁱ	-37.37 ⁱ	240,540 ⁱ	8.798	96.677	2,398,077*
GCF	57,923 ⁱ	1,600 ⁱ	3,976,284 ⁱ	-4,181 ⁱ	245,901 ⁱ	8.786	97.094	2,418,519*
CPI	62.835	66.460	348.168	0.000	35.621	0.088	3.631	91.450*
POP	31.66 ⁱ	5.78 ⁱ	1,364.27 ⁱ	0.03 ⁱ	120.81 ⁱ	8.441	79.831	1,629,269*
RINT	6.367	6.076	789.799	-97.812	17.561	20.778	950.244	157,137,391*

ⁱ millions

* denotes significance level at 1%

Note: Dataset includes annual data sets for 181 countries between 1980 and 2014.

Table 2: Correlation Matrix

Variables	GLOE	GLOP	GLOS	FD	FIA	FID	FIE	FI	FMA	FMD	FME	FM	GDP	GFCF	GCF	CPI	POP	RINT
GLOE	1.000																	
GLOP	0.386	1.000																
GLOS	0.813	0.496	1.000															
FD	0.681	0.588	0.807	1.000														
FIA	0.644	0.483	0.772	0.846	1.000													
FID	0.663	0.552	0.744	0.907	0.754	1.000												
FIE	0.286	0.278	0.345	0.502	0.398	0.389	1.000											
FI	0.679	0.548	0.793	0.937	0.925	0.904	0.604	1.000										
FMA	0.573	0.433	0.686	0.831	0.651	0.694	0.318	0.704	1.000									
FMD	0.627	0.510	0.683	0.880	0.614	0.809	0.344	0.740	0.721	1.000								
FME	0.371	0.504	0.521	0.743	0.472	0.585	0.226	0.544	0.528	0.662	1.000							
FM	0.598	0.555	0.721	0.938	0.662	0.797	0.338	0.758	0.855	0.910	0.847	1.000						
GDP	0.160	0.309	0.262	0.422	0.351	0.395	0.042	0.358	0.264	0.426	0.434	0.433	1.000					
GFCF	0.140	0.297	0.239	0.410	0.327	0.376	0.065	0.343	0.251	0.414	0.436	0.424	0.961	1.000				
GCF	0.136	0.298	0.237	0.408	0.323	0.371	0.065	0.339	0.252	0.413	0.438	0.425	0.956	0.999	1.000			
CPI	0.472	0.425	0.430	0.395	0.378	0.355	0.240	0.401	0.298	0.393	0.206	0.341	0.139	0.141	0.139	1.000		
POP	-0.113	0.184	-0.072	0.121	-0.027	0.058	0.054	0.024	0.047	0.123	0.344	0.202	0.355	0.446	0.459	-0.034	1.000	
RINT	0.029	0.034	0.006	-0.006	0.019	0.008	-0.026	0.007	-0.020	-0.023	-0.004	-0.018	0.000	-0.003	-0.003	0.078	-0.001	1.000

3.2.2 Methodology

Following the descriptive statistics and correlation coefficients matrix, four panel unit root tests were utilized in order to examine existence of unit roots in the series. Levin, Lin and Chu – LLC (Levin et al, 2002), Im, Pesaran and Shin (IPS) (Im et al, 2003), the Fisher tests; Augmented Dickey-Fuller (ADF) and Phillips Perron (Choi, 2001) have been used to test stationary nature of panel series.

Dynamic Ordinary Least Squares (DOLS) and Fully Modified Ordinary Least Squares (FMOLS) and additionally as in study by Beck and Levine (2004) dynamic control method Generalized Method of Moments (GMM) methods have been used to assess the long-term coefficients in equation (2).

3.3 Results

Table 2 presents correlation coefficients among series which generally illustrate moderate to high correlations signaling that regressors in equation (2) are expected to have significant effects on globalization indicators. On the other hand, Table 3 presents panel unit root test results which indicate that all panel series are stationary at their level forms. Therefore, equation (2) can now be estimated by three is the appropriate methods to test for long run relationship in panel data using the Dynamic Ordinary Least Squares (DOLS), Fully Modified Ordinary Least Squares (FMOLS) and Generalized Method of Moments (GMM) approaches.

Table 3: Panel Unit Root Test

Variables	LLC	IPS	ADF	P.P.	Variables	LLC	IPS	ADF	P.P.
GLOE					FMD				
t_T	0.70	3.22	279.32	232.23	t_T	1.13	0.62	323.94	234.41
t_m	-7.21*	2.35	315.27	353.69	t_m	-2.13	3.93	234.72	201.27
t	-	-	27.99	25.67	t	-6.78*	-	610.99*	681.92*
GLOP					FME				
t_T	-13.20*	-12.40*	1042.33*	1112.82*	t_T	-4.92*	-5.16*	363.87*	323.24*
t_m	-10.13*	-4.83*	655.46*	675.37*	t_m	-6.47*	-5.45*	361.04*	318.38*
t	12.20	-	35.93	24.46	t	-6.00*	-	319.94*	325.10*
GLOS					FM				
t_T	0.21	4.12	332.67	263.52	t_T	-1.05	-1.17	386.82*	304.85
t_m	-5.93*	3.24	349.62	447.34*	t_m	-5.49*	-1.04	351.39	340.13
t	13.80	-	53.94	45.41	t	-4.70*	-	542.56*	690.73*
FD					GDP				
t_T	-3.40*	-1.92	450.67*	389.18	t_T	-5.72*	-0.46	518.77*	355.69
t_m	-6.46*	-1.01	389.93	435.00*	t_m	1.11	15.36	254.11	316.53
t	-12.02*	-	721.80*	960.84*	t	-	-	13.34	11.16
FIA					GFCF				
t_T	4.40	8.20	310.40	211.74	t_T	-4.64*	-2.70*	399.95*	295.86
t_m	4.63	10.45	283.05	276.53	t_m	-0.79	5.92	194.37	167.18
t	-15.76*	-	911.40*	975.91*	t	-	-	37.76	33.96
FID					GCF				
t_T	-1.45	-0.83	426.08*	401.45	t_T	-3.64*	-2.27	383.99*	339.45
t_m	-9.34*	-2.98*	468.22*	457.14*	t_m	0.62	5.96	193.96	195.39
t	-16.53*	-	954.53*	1100.47*	t	-	-	44.30	43.62
FIE					CPI				
t_T	-8.03*	-7.07*	605.69*	599.04*	t_T	-31.60*	-15.97*	1506.92*	4155.39*
t_m	-12.40*	-11.30*	735.92*	728.24*	t_m	-25.89*	-18.55*	1555.86*	2288.90*
t	-6.90*	-	399.26	474.24*	t	-	-	73.24	62.90
FI					POP				
t_T	-1.21	-0.29	433.89*	399.83	t_T	-4.58*	-8.79*	979.57*	426.67
t_m	-5.96*	-0.66	418.36	488.34*	t_m	-6.81*	1.19	632.36*	1508.06*
t	-14.01*	-	793.27*	1196.66*	t	6.90	-	175.34	90.27
FMA					RINT				
t_T	-0.48	-3.92*	347.41*	473.96*	t_T	-245.53*	-45.51*	1679.05*	2462.11*
t_m	-13.33*	-8.83*	407.57*	466.55*	t_m	-441.09*	-94.19*	1432.57*	1630.30*
t	-3.73*	-	483.32*	626.42*	t	-246.86*	-	1439.43*	1703.54*

* denotes rejection of the null hypothesis existence of unit root at the 1%.

τ_T symbolizes the model with a drift and trend

τ_μ symbolizes the model with a drift and no trend

τ symbolizes model with no drift and trend

Tables 4 through 12 presents the DOLS, FMOLS and GMM results which are built on equation (2). It is worth noting that all tables have been provided for different model options from the narrowest ones to the widest ones. This would enable us to check consistency and robustness of regression results for equation (2) (Imamoglu et al., 2018).

Table 4: The Results of Dynamic OLS Regression Method for Economic Globalization (GLOE)

Method: Dynamic OLS																
Dependent Variable: Economic Globalization																
<i>lnFD</i>	0.052***	0.090***	0.075***	0.141***	0.195***	0.093**	-0.079	-0.020	0.024	-0.188	1.193*	0.462***	-0.229**	-0.234**	-0.260**	
<i>lnFIA</i>		-0.050***	-0.066***	-0.059***	-0.047**	-0.082**	-0.047	-0.047	-0.112	-0.093	-0.839	-0.077	-0.018	-0.099	-0.132**	
<i>lnFID</i>			0.071***	0.071***	0.103***	0.031	0.016	0.045	0.019	-0.026	0.179	-0.025	0.080*	0.041	0.023	
<i>lnFIE</i>				-0.090***	-0.041	-0.043	-0.003	0.132*	0.098	-0.122	0.146	0.279	0.051	0.012	0.010	
<i>lnFI</i>					-0.171**	-0.075	-0.028	-0.194	-0.084	0.493**	-0.459	-0.893	0.057	0.248	0.362*	
<i>lnFMA</i>						0.044***	0.003	-0.020	-0.012	-0.040*	-0.442**	-0.192***	0.021	0.031*	0.032*	
<i>lnFMD</i>							0.097***	0.066***	0.086***	0.066**	-0.196*	-0.020	0.062***	0.074***	0.094***	
<i>lnFME</i>								0.000	0.022	0.019	-0.031	0.015	-0.010	-0.004	-0.003	
<i>lnFM</i>									-0.070	0.057	-0.051	-0.087	0.078	0.058	0.043	
<i>lnGDP</i>											-0.266***	0.385	-0.432***	0.079	0.165**	0.148*
<i>lnGFCF</i>												-0.024	0.296	-0.097	-0.111	-0.125*
<i>lnGCF</i>													-0.332	0.033	0.038	0.051
<i>lnCPI</i>														0.011**	0.026***	0.027***
<i>lnPOP</i>															-0.396*	-0.469**
RINT																0.001
<i>Obs.</i>	4816	4768	4729	4607	4020	2944	3055	372	334	240	55	153	1722	1662	1563	
<i>Adjusted R²</i>	0.945	0.945	0.950	0.951	0.956	0.957	0.958	0.914	0.916	0.946	0.949	0.936	0.965	0.971	0.969	
<i>S.E. of reg.</i>	0.099	0.098	0.094	0.094	0.091	0.081	0.079	0.066	0.067	0.066	0.037	0.059	0.069	0.064	0.064	
<i>Long-run var.</i>	0.023	0.020	0.016	0.014	0.012	0.007	0.004	0.003	0.003	0.002	0.000	0.002	0.005	0.004	0.004	

* symbolizes the statistical significance at 10%

** symbolizes the statistical significance at 5%

*** symbolizes the statistical significance at 1%

Table 5. The Results of Fully Modified OLS Regression Method for Economic Globalization (GLOE)

Method: Fully Modified OLS																
Dependent Variable: Economic Globalization																
<i>lnFD</i>	0.328***	0.180***	0.083***	0.302***	0.367***	0.333***	-0.064	-0.247***	-0.293***	-0.294***	-0.284***	-0.231***	-0.180***	-0.178***	-0.217***	
<i>lnFIA</i>		0.159***	0.103***	0.119***	0.154***	0.159***	0.106***	0.164***	0.158***	0.087***	0.072**	0.057*	0.029	0.029	0.048	
<i>lnFID</i>			0.157***	0.101***	0.133***	0.211***	0.135***	0.171***	0.167***	0.113***	0.130***	0.092***	0.096***	0.095***	0.100***	
<i>lnFIE</i>				-0.305***	-0.188***	-0.156***	-0.117***	-0.017	-0.020	-0.024	-0.007	-0.048	-0.016	-0.018	-0.022	
<i>lnFI</i>					-0.249***	-0.362***	-0.082	-0.153*	-0.100	-0.002	0.007	0.062	0.027	0.028	0.054	
<i>lnFMA</i>						0.023*	0.001	0.008	-0.002	-0.013	-0.023**	-0.005	-0.008	-0.008	-0.005	
<i>lnFMD</i>							0.146***	0.174***	0.162***	0.111***	0.123***	0.142***	0.120***	0.119***	0.128***	
<i>lnFME</i>								0.022**	0.010	0.009	0.038***	0.043***	0.041***	0.041***	0.053***	
<i>lnFM</i>									0.048**	0.061***	0.029	-0.033	-0.037	-0.037	-0.056*	
<i>lnGDP</i>										0.180***	0.311***	0.318***	0.321***	0.323***	0.340***	
<i>lnGFCF</i>											-0.116***	-0.186***	-0.165***	-0.163***	-0.170***	
<i>lnGCF</i>												0.051*	0.036	0.035	0.029	
<i>lnCPI</i>													0.016***	0.016***	0.016***	
<i>lnPOP</i>														-0.006	-0.046	
RINT																0.000
<i>Obs.</i>	4906	4858	4841	4841	4841	3327	3327	3003	3003	2912	2542	2473	2268	2268	2139	
<i>Adjusted R²</i>	0.768	0.786	0.795	0.808	0.810	0.848	0.872	0.890	0.890	0.906	0.913	0.905	0.916	0.916	0.915	
<i>S.E. of reg.</i>	0.203	0.194	0.190	0.184	0.183	0.149	0.136	0.123	0.122	0.113	0.110	0.104	0.100	0.100	0.100	
<i>Long-run var.</i>	0.124	0.114	0.110	0.101	0.101	0.066	0.055	0.044	0.044	0.036	0.033	0.034	0.033	0.033	0.035	

* symbolizes the statistical significance at 10%

** symbolizes the statistical significance at 5%

*** symbolizes the statistical significance at 1%

Table 6. Results of Generalized Method of Moments (GMM) Regressions for Economic Globalization

Method: Generalized Method of Moments (GMM)															
Dependent Variable: Economic Globalization															
<i>lnGLO (-1)</i>	1.001***	1.001***	1.001***	1.001***	1.001***	1.001***	1.001***	1.001***	1.000***	0.987***	0.987***	0.987***	0.985***	0.976***	0.975***
<i>lnFD</i>	0.007***	0.006***	-0.003	0.000	0.003	0.005	0.014**	0.005	-0.015	-0.018*	-0.019	-0.022*	-0.025*	-0.022*	-0.021*
<i>lnFIA</i>		-0.001	0.000	-0.001	0.001	0.005**	0.004*	0.000	0.001	0.004	0.005	0.006	0.008*	0.004	0.004
<i>lnFID</i>			-0.003	-0.003*	-0.001	0.002	0.004	0.001	0.001	0.003	0.006	0.006	0.007	0.005	0.004
<i>lnFIE</i>				-0.006**	-0.001	-0.002	-0.001	-0.005	-0.003	0.004	0.008	0.010	0.011*	0.012*	0.013**
<i>lnFI</i>					-0.012*	-0.024***	-0.029***	-0.012	0.000	-0.005	-0.011	-0.012	-0.014	-0.017*	-0.016
<i>lnFMA</i>						-0.002*	-0.002**	-0.001	-0.003**	-0.002*	-0.002	-0.002	-0.001	-0.002*	-0.002*
<i>lnFMD</i>							-0.003**	-0.002	-0.004***	-0.004**	-0.005**	-0.005**	-0.004*	-0.003	-0.002
<i>lnFME</i>								0.001	0.000	-0.002	-0.002	-0.002	-0.002	-0.001	-0.001
<i>lnFM</i>									0.012***	0.012***	0.013***	0.013***	0.013***	0.011**	0.010**
<i>lnGDP</i>										0.002***	0.004	0.004	0.006	0.010**	0.010**
<i>lnGFCF</i>											-0.002	0.014*	0.013	0.015*	0.014*
<i>lnGCF</i>												-0.015**	-0.017**	-0.018***	-0.016**
<i>lnCPI</i>													0.000	0.001	0.001
<i>lnPOP</i>														-0.007***	-0.007***
<i>RINT</i>															-0.000*
Adj. R ²	0.978	0.978	0.978	0.978	0.978	0.983	0.983	0.984	0.984	0.984	0.983	0.983	0.984	0.984	0.984
D-W stat	2.013	2.013	2.013	2.013	2.013	2.000	1.999	2.013	2.013	2.013	2.004	2.006	2.006	2.007	2.006
Instr. rank	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33
AR(1) prob.	0.265	0.252	0.207	0.190	0.182	0.000	0.001	0.006	0.010	0.007	0.010	0.012	0.042	0.026	0.030
J-stat.	118.678	131.264	135.990	142.734	149.685	105.729	160.546	178.508	177.338	162.719	142.410	141.463	133.808	136.508	134.923
Prob (J-stat)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

* symbolizes the statistical significance at 10%
 ** symbolizes the statistical significance at 5%
 *** symbolizes the statistical significance at 1%

Table 7. The Results of Dynamic OLS Regression Method for Political Globalization (GLOP)

Method: Dynamic OLS															
Dependent Variable: Political Globalization															
<i>lnFD</i>	0.020	0.015	0.011	0.058*	0.065*	0.094**	0.044	-0.086	-0.277	-0.073	-0.405	0.236*	-0.036	-0.024	0.034
<i>lnFIA</i>		-0.021	-0.028**	-0.012	0.035*	-0.082**	-0.085**	-0.155	-0.283**	-0.247***	-0.765*	-0.422***	-0.122**	0.023	-0.030
<i>lnFID</i>			0.012	0.001	0.029*	-0.070**	-0.045	-0.012	-0.094	0.000	-0.029	-0.001	-0.048	0.029	0.004
<i>lnFIE</i>				-0.066***	0.064	-0.135***	-0.028	0.062	-0.075	-0.164	-0.467	-0.261	-0.113*	-0.042	-0.036
<i>lnFI</i>					-0.218***	0.185*	0.101	0.173	0.821*	0.583	1.611	0.349	0.307**	0.068	0.108
<i>lnFMA</i>						0.047***	0.022	-0.010	-0.018	0.028	-0.061	-0.046	0.031	0.021	0.030
<i>lnFMD</i>							0.030**	0.052	0.076*	-0.006	-0.018	-0.115**	-0.004	0.000	0.009
<i>lnFME</i>								0.012	0.029	0.057	-0.040**	-0.020	-0.021	-0.018	-0.018
<i>lnFM</i>									-0.023	-0.020	0.635**	0.078	0.099*	0.049	0.029
<i>lnGDP</i>										-0.547***	-0.227	-0.273**	0.110	0.165*	0.114
<i>lnGFCF</i>											-0.051	0.473**	0.133*	0.081	0.067
<i>lnGCF</i>												-0.278	-0.145**	-0.103	-0.066
<i>lnCPI</i>													0.007	0.006	0.000
<i>lnPOP</i>														0.846***	0.782***
<i>RINT</i>															0.002*
<i>Obs.</i>	5482	5385	5343	5198	4327	2959	3094	396	358	264	55	153	1722	1662	1563
<i>Adjusted R²</i>	0.962	0.962	0.962	0.963	0.944	0.928	0.924	0.894	0.895	0.941	0.993	0.976	0.924	0.930	0.929
<i>S.E. of reg.</i>	0.108	0.107	0.106	0.105	0.101	0.089	0.094	0.128	0.128	0.095	0.037	0.051	0.081	0.079	0.080
<i>Long-run var.</i>	0.022	0.019	0.017	0.014	0.011	0.007	0.005	0.013	0.011	0.006	0.000	0.001	0.006	0.005	0.005

* symbolizes the statistical significance at 10%

** symbolizes the statistical significance at 5%

*** symbolizes the statistical significance at 1%

Table 8. The Results of Fully Modified OLS Regression Method for Political Globalization (GLOP)

Method: Fully Modified OLS															
Dependent Variable: Political Globalization															
<i>lnFD</i>	0.357***	0.106***	0.017	0.180***	0.210***	0.186***	-0.078*	-0.025	-0.054	-0.063	-0.148**	-0.102	-0.053	-0.036	-0.044
<i>lnFIA</i>		0.249***	0.198***	0.209***	0.224***	0.165***	0.134***	0.135***	0.132***	0.014	0.035	0.025	0.033	0.007	-0.035
<i>lnFID</i>			0.141***	0.096***	0.110***	0.178***	0.127***	0.143***	0.142***	0.064***	0.100***	0.076**	0.071**	0.062**	0.023
<i>lnFIE</i>				-0.217***	-0.166***	-0.072	-0.047	-0.017	-0.016	-0.057	-0.037	-0.053	-0.023	-0.053	-0.075*
<i>lnFI</i>					-0.110	-0.175**	0.009	-0.089	-0.061	0.100	0.109	0.118	0.051	0.138	0.262**
<i>lnFMA</i>						0.033**	0.018	0.024*	0.020	0.006	0.017	0.021*	0.019	0.028**	0.041***
<i>lnFMD</i>							0.096***	0.094***	0.087***	0.010	0.005	0.017	0.007	0.016	0.022
<i>lnFME</i>								-0.014*	-0.020*	-0.017**	-0.007	-0.006	-0.013	-0.014	-0.008
<i>lnFM</i>									0.026	0.039	0.061**	0.025	0.023	-0.001	-0.030
<i>lnGDP</i>										0.266***	0.341***	0.342***	0.346***	0.226***	0.213***
<i>lnGFCF</i>											-0.090***	-0.119***	-0.109***	-0.144***	-0.138***
<i>lnGCF</i>												0.028	0.036	0.081**	0.082**
<i>lnCPI</i>													0.005*	0.000	-0.001
<i>lnPOP</i>														0.309***	0.345***
<i>RINT</i>															0.001**
<i>Obs.</i>	5563	5482	5455	5455	5455	3376	3376	3027	3027	2566	2566	2473	2268	2268	2139
<i>Adjusted R²</i>	0.833	0.858	0.860	0.865	0.865	0.792	0.805	0.804	0.804	0.851	0.845	0.844	0.855	0.859	0.858
<i>S.E. of reg.</i>	0.226	0.208	0.205	0.202	0.202	0.156	0.151	0.147	0.147	0.125	0.122	0.119	0.116	0.115	0.114
<i>Long-run var.</i>	0.151	0.126	0.123	0.119	0.119	0.073	0.067	0.062	0.062	0.042	0.039	0.040	0.035	0.034	0.037

* symbolizes the statistical significance at 10%

** symbolizes the statistical significance at 5%

*** symbolizes the statistical significance at 1%

Table 9. Results of Generalized Method of Moments (GMM) Regressions for Political Globalization

Method: Generalized Method of Moments (GMM)																	
Dependent Variable: Political Globalization																	
<i>lnGLOP (-1)</i>	1.000***	1.000***	1.000***	0.999***	0.999***	0.998***	0.998***	0.998***	0.998***	0.998***	0.945***	0.941***	0.941***	0.940***	0.939***	0.939***	
<i>lnFD</i>	-0.012***	-0.016***	-0.011***	-0.004	-0.004	-0.006	0.005	0.011	0.000	0.020	0.011	0.009	0.009	0.013	0.013		
<i>lnFIA</i>		0.003**	0.004**	0.003*	0.003	-0.001	-0.001	-0.007	-0.007	-0.002	-0.002	0.000	-0.003	-0.005	-0.006		
<i>lnFID</i>			-0.004**	-0.006***	-0.005**	-0.008**	-0.006	-0.009**	-0.009*	0.001	0.003	0.004	-0.001	-0.002	-0.002		
<i>lnFIE</i>				-0.014***	-0.013**	-0.022***	-0.022***	-0.025***	-0.024***	-0.002	0.002	0.004	-0.002	-0.003	-0.002		
<i>lnFI</i>					-0.002	0.008	0.002	0.014	0.020	-0.016	-0.013	-0.016	-0.006	-0.008	-0.008		
<i>lnFMA</i>						0.001	0.001	0.001	0.000	-0.002	-0.001	-0.001	-0.001	-0.001	-0.001		
<i>lnFMD</i>									-0.004**	-0.005**	-0.006**	-0.004*	-0.007**	-0.007**	-0.006**	-0.006**	
<i>lnFME</i>									-0.001	-0.002	-0.003**	-0.004**	-0.004**	-0.003*	-0.002	-0.002	
<i>lnFM</i>										0.006	-0.002	0.003	0.003	0.002	0.001	0.001	
<i>lnGDP</i>											0.009***	0.015***	0.015***	0.015***	0.016***	0.016***	
<i>lnGFCF</i>												-0.006	0.001	0.013	0.015	0.015	
<i>lnGCF</i>													-0.007	-0.018**	-0.019**	-0.018**	
<i>lnCPI</i>														0.003***	0.003***	0.003***	
<i>lnPOP</i>															-0.004*	-0.004*	
RINT																	0.000
Adj. R ²	0.971	0.971	0.971	0.971	0.971	0.947	0.947	0.952	0.952	0.954	0.952	0.952	0.953	0.953	0.953	0.953	
D-W stat	2.046	2.033	2.032	2.032	2.032	2.013	2.013	2.018	2.018	2.029	2.017	2.018	2.017	2.015	2.015	2.016	
Instr. rank	5	7	9	11	13	15	17	19	21	23	25	27	29	31	31	33	
AR(1) prob.	0.000	0.000	0.000	0.000	0.000	0.370	0.334	0.053	0.155	0.386	0.366	0.443	0.115	0.130	0.125	0.125	
J-stat.	161.020	161.895	161.439	183.021	187.111	209.775	206.516	194.795	197.709	71.015	70.039	80.368	68.760	71.476	73.574	73.574	
Prob (J-stat)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

* symbolizes the statistical significance at 10%

** symbolizes the statistical significance at 5%

*** symbolizes the statistical significance at 1%

Table 10. The Results of Dynamic OLS Regression Method for Social Globalization (GLOS)

Method: Dynamic OLS															
Dependent Variable: Social Globalization															
<i>lnFD</i>	0.026**	0.110***	0.109***	0.123***	0.221***	0.145***	-0.025	-0.201**	-0.223	-0.455**	-0.824	0.119	0.056	0.045	0.045
<i>lnFIA</i>		-0.096***	-0.108***	-0.099***	-0.062***	-0.121***	-0.169***	-0.221***	-0.274***	-0.120*	0.926	0.136	-0.184***	-0.108*	-0.074
<i>lnFID</i>			0.027**	0.021*	0.064***	0.043	0.007	0.043	-0.004	-0.084	0.768	0.302*	0.069	0.077	0.112*
<i>lnFIE</i>				-0.017	0.091**	0.077	0.086	0.110	0.012	-0.305**	1.007	0.381	0.009	-0.092	-0.044
<i>lnFI</i>					-0.283***	-0.150	-0.004	-0.128	0.125	0.725**	-2.412	-0.838	0.043	0.040	-0.079
<i>lnFMA</i>						0.075***	0.035**	0.050**	0.046**	0.043	-0.039	0.057	0.046**	0.031*	0.032
<i>lnFMD</i>							0.059***	-0.017	0.005	-0.022	-0.220	-0.062	0.063***	0.031	0.024
<i>lnFME</i>								0.034**	0.034	0.028	-0.017	0.001	0.000	0.014	0.017
<i>lnFM</i>									-0.018	0.094	0.979	0.027	0.004	0.008	0.006
<i>lnGDP</i>										-0.287***	0.943	0.525***	0.061	0.083	0.116
<i>lnGFCF</i>											-0.085	0.125	0.063	0.052	0.078
<i>lnGCF</i>												-0.064	0.016	0.041	0.018
<i>lnCPI</i>													0.008*	-0.005	-0.011
<i>lnPOP</i>														0.084	0.237
<i>RINT</i>															0.001
<i>Obs.</i>	5437	5343	5304	5166	4311	2951	3085	396	358	264	55	153	1722	1662	1563
<i>Adjusted R²</i>	0.974	0.976	0.977	0.977	0.979	0.978	0.977	0.958	0.963	0.980	0.877	0.973	0.977	0.982	0.982
<i>S.E. of reg.</i>	0.094	0.090	0.089	0.088	0.088	0.080	0.082	0.085	0.083	0.074	0.063	0.068	0.079	0.070	0.068
<i>Long-run var.</i>	0.021	0.017	0.014	0.012	0.011	0.006	0.004	0.005	0.005	0.003	0.001	0.002	0.006	0.004	0.004

* symbolizes the statistical significance at 10%

** symbolizes the statistical significance at 5%

*** symbolizes the statistical significance at 1%

Table 11. The results of fully modified OLS regression method for social globalization (GLOS)

Method: Fully Modified OLS															
Dependent Variable: Social Globalization															
<i>lnFD</i>	0.400***	0.269***	0.206***	0.472***	0.586***	0.448***	0.026	-0.113*	-0.060	-0.034	-0.053	0.003	0.136*	0.144*	0.128
<i>lnFIA</i>		0.148***	0.112***	0.129***	0.186***	0.251***	0.200***	0.189***	0.193***	0.053*	0.098***	0.085**	0.087**	0.078*	0.098**
<i>lnFID</i>			0.101***	0.029*	0.082***	0.186***	0.108***	0.117***	0.119***	0.056**	0.059*	0.031	0.056	0.052	0.073*
<i>lnFIE</i>				-0.355***	-0.165***	-0.118**	-0.074	-0.048	-0.050	-0.026	-0.020	-0.050	-0.008	-0.021	-0.026
<i>lnFI</i>					-0.415***	-0.540***	-0.255***	-0.193*	-0.241**	-0.137	-0.177	-0.148	-0.305**	-0.272**	-0.308**
<i>lnFMA</i>						0.091***	0.067***	0.064***	0.071***	0.059**	0.056***	0.068***	0.065***	0.068***	0.087***
<i>lnFMD</i>							0.155***	0.194***	0.206***	0.122***	0.120***	0.140***	0.118***	0.121***	0.137***
<i>lnFME</i>								0.012	0.022**	0.026**	0.025**	0.026**	0.041***	0.041***	0.053***
<i>lnFM</i>									-0.048	-0.052*	-0.015	-0.070**	-0.107***	-0.116***	-0.157***
<i>lnGDP</i>										0.311***	0.317***	0.323***	0.322***	0.279***	0.254***
<i>lnGFCF</i>											-0.041	-0.141***	-0.125**	-0.135***	-0.103*
<i>lnGCF</i>												0.087**	0.069*	0.084**	0.074*
<i>lnCPI</i>													0.014***	0.012***	0.011**
<i>lnPOP</i>														0.110	0.058
<i>RINT</i>															0.000
<i>Obs.</i>	5553	5472	5455	5455	5455	3376	3376	3027	3027	2936	2566	2473	2268	2268	2139
<i>Adjusted R²</i>	0.878	0.890	0.892	0.901	0.903	0.890	0.904	0.900	0.900	0.923	0.928	0.921	0.927	0.927	0.929
<i>S.E. of reg.</i>	0.204	0.194	0.192	0.184	0.183	0.180	0.168	0.160	0.160	0.140	0.135	0.135	0.133	0.133	0.131
<i>Long-run var</i>	0.127	0.113	0.112	0.101	0.099	0.095	0.084	0.076	0.075	0.056	0.051	0.053	0.051	0.051	0.054

* symbolizes the statistical significance at 10%

** symbolizes the statistical significance at 5%

*** symbolizes the statistical significance at 1%

Table 12. Results of Generalized Method of Moments (GMM) Regressions for Social Globalization

Method: Generalized Method of Moments (GMM)															
Dependent Variable: Social Globalization															
<i>lnGLOS (-1)</i>	1.001***	1.002***	1.002***	1.001***	1.002***	1.000***	1.000***	1.001***	1.000***	0.980***	0.982***	0.983***	0.979***	0.964***	0.964***
<i>lnFD</i>	-0.005***	0.001	0.003	0.010***	0.015***	0.009*	0.024***	0.003	-0.032**	-0.036***	-0.037***	-0.041***	-0.041***	-0.033**	-0.033**
<i>lnFIA</i>		-0.004***	-0.004***	-0.004***	-0.001	-0.001	-0.002	-0.003	-0.002	0.007*	0.006	0.007	0.010**	0.009*	0.009*
<i>lnFID</i>			-0.002	-0.004**	-0.001	0.001	0.003	0.003	0.004	0.007*	0.010**	0.010**	0.012**	0.010**	0.010*
<i>lnFIE</i>				-0.014***	-0.004	-0.010*	-0.010*	-0.009	-0.006	0.005	0.005	0.007	0.007	0.008	0.009
<i>lnFI</i>					-0.022***	-0.019*	-0.027***	-0.011	0.010	-0.001	-0.002	-0.002	-0.009	-0.019	-0.019
<i>lnFMA</i>						-0.001	-0.001	0.000	-0.003*	-0.002	-0.002	-0.002	-0.001	-0.002	-0.002
<i>lnFMD</i>							-0.005***	-0.006***	-0.010***	-0.008***	-0.009***	-0.009***	-0.011***	-0.010***	-0.009***
<i>lnFME</i>								0.004***	0.001	-0.001	0.000	0.000	0.000	0.002	0.002
<i>lnFM</i>									0.020***	0.021***	0.021***	0.022***	0.023***	0.019***	0.019***
<i>lnGDP</i>										0.004***	0.004	0.003	0.008	0.015***	0.015***
<i>lnGFCF</i>											-0.001	0.018**	0.016*	0.018*	0.017*
<i>lnGCF</i>												-0.018**	-0.021***	-0.021***	-0.020**
<i>lnCPI</i>													0.003***	0.004***	0.004***
<i>lnPOP</i>														-0.010***	-0.010***
RINT															0.000
Adj. R ²	0.992	0.992	0.992	0.992	0.992	0.989	0.989	0.988	0.988	0.988	0.989	0.989	0.989	0.989	0.989
D-W stat	2.016	2.015	2.015	2.013	2.012	2.027	2.028	2.022	2.021	2.004	1.981	1.982	1.990	1.990	1.990
Instr. rank	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33
AR(1) prob.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
J-stat.	138.146	133.093	131.962	149.262	158.808	104.204	92.527	76.083	72.656	20.946	30.518	31.787	35.379	56.520	57.670
Prob (J-stat)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.034	0.002	0.003	0.001	0.000	0.000

* symbolizes the statistical significance at 10%

** symbolizes the statistical significance at 5%

*** symbolizes the statistical significance at 1%

Firstly, Tables 4, 5 and 6 provides three different regression methods where economic globalization is dependent variable in dynamic OLS (DOLS), fully modified OLS (FMOLS) and Generalized Method of Moments (GMM) options respectively. In all three methods it can be seen that the effects of the composite overall financial development index (FD) are positively and significant in initial models without control variables. While, it turns to negative in as the model expands. At the further steps, as macroeconomic variables are added the coefficients in the equation become significantly negative. This result depicts that as the economic globalization and global financial system are concerned; financial development trends positively contributes to economic globalization. However, when major macroeconomic effects are taken into account, it is seen that financial system is captivated by economic influences such as real income, inflation and capital. Therefore, the response of financial system to economic globalization turns to negative then.

The results in tables 4 and 5 and 6 all reveal that inflation positively contributes to globalization at economic terms. It is evident that financial system is expected to contribute to trade openness, FDI, and capital accumulation. It is also seen that population growth is a constraint for economic globalization as expected since its coefficients are generally negatively significant. As the population growth leads to lower per person income and hence lower economic growth (Dreher, 2006). Additionally, as stated in relevant literature, the relationship between financial markets and economic globalization has been found positively significant. This shows that domestic improvement in financial markets likely to improve countries' economic development. This judgement seems to provide a positive response to the question of whether financial markets subsidize the economic globalization. The

other proxies of financial development in Tables 4, 5 and 6 are provided mixed results far as the signs of coefficients are concerned.

Tables 7, 8 and 9 provide regression results of models where political globalization is dependent variable. It is seen that the coefficient of the overall financial development index is positively significant in general. Financial system contributes globalization trends as far as politics is concerned positively. However, similar to results in Tables 4 and 5, and 6 when control variables are added, in some model options again the sign of coefficient of financial development index (*lnFD*) becomes negatively significant no matter whether DOLS or FMOLS options are concerned. As far as population growth is concerned, results in tables 7, 8 and 9 showed that political globalization is positively linked to population growth which this finding should not be surprising.

Finally, the results depicted in tables 10, 11 and 12 provide regression results of models where social globalization is dependent variable. Generally, it is observed that not only the overall financial development index (*lnFD*) but also the other financial system proxies positively are linked to social globalization trends. It is evident that global socialization trends benefit from financial markets positively as expected; for example, previous studies show how financial system positively impacts on international tourism as a part of social integration of countries (Katircioglu et al., 2018). It is important to note that real income growth continuously exerts positively significant effects on social globalization; this finding is consistent with positive link between financial system and social globalization.

Interestingly, estimations in Tables 10, 11 and 12 do not suggest significant effects of population growth on social globalization. This reveals that socialization of communities is not statistically related to population growth.

3.4 Conclusion

This part of the thesis strived to investigate the role of financial development in globalization trends of the selected 181 countries. From 1980 to 2014 a global panel data has been created and three different globalization data has been crumbled into sub-categories: Economic globalization (GLOE), political globalization (GLOP), and social globalization (GLOS). The results of panel models suggesting that worldwide financial structure has a positive contribution to GLOE, GLOP and GLOS. Globalization aspects like trade openness, flows of financial direct investment, tourism, number of embassies in the countries and involvement in international treaties and organizations positively benefit from financial markets. But, macroeconomic features such as national income, consumer price index, and growth rate of population absorb countries' financial system, this effect can be sometimes negative depending on their macroeconomic performances. Regression outcomes exposed that macroeconomic factors like rate of growth of population, inflation and real income can be major drivers for globalization in the world among macroeconomic variables.

This thesis has displayed that progress of macroeconomic factors of selected countries are significant drivers of economic, political, and social globalization. Consequently, in order to enable contribution of financial markets to such integration, sustainability of their major socio/economic factors such as economic growth, stability of price levels and maintainable population growth are the key

elements of this research according to the major findings of this study. Else, creating additional socio-economic problems can prevent affirmative effects of financial markets. Further studies are vacant to research the impacts of other socio-economic variables by using different economic approaches also.

Chapter 4

MODERATING ROLE OF ECONOMIC GROWTH ON THE FINANCIAL DEVELOPMENT AND GLOBALIZATION NEXUS

4.1 Introduction

The literature has investigated relationship of financial development on economic growth for decades. The common results reveal that the financial development in a country boosts economic activities. In addition, researchers also examined the relationship between globalization and economic growth. This thesis investigates the connection between globalization and financial development. In this part of thesis, the relationship between three globalization indices (economic globalization, political globalization and social globalization) and the financial development with the interaction effect will be examined.

Previous studies have analyzed the direct relationship using regression models between two variables. While, in this part of the thesis; not only the direct relationship of two variables, but the interaction of the third variable will be added to model as the moderating variable. The main hypothesis in this chapter is to assess the relationship between globalization and financial development. Both main effects model and the model with moderating factor will be investigated and the results will be compared.

4.2 Theoretical Setting

This chapter will investigate financial development impact on economic, political and social globalization in two models: main effects and interaction effect. Main effects model is expressed in equation (1), which depicts three major globalization indices as the function of financial development index and control variables.

$$GLO_i = f [FDi_i, GDP_i, RINT_i, GFCF_i, GCF_i, CPI_i, POP_i] \quad (1)$$

where in equation (1) GLO stands for three globalization proxies: economic globalization (GLOE), political globalization (GLOP), and social globalization (GLOS). In the equation FDi stands for the financial development index. Control variables added to the model to exert influential effects of comparative relations with independent variables. The remaining six variables are added as control variables: gross domestic product (constant 2010, US\$) (GDP), real interest rate (RINT), gross fixed capital formation (constant 2010, US\$) (GFCF), gross capital formation (constant 2010, US\$) (GCF), consumer price index (2010 = 100) (CPI), and overall population (POP).

The second model includes the moderation effect variable. Financial development index multiplied by gross domestic product of the country added to the model as independent variable to exert the interaction effect of financial development on globalization. So, equation (2) is constructed as:

$$GLO_i = f [FDi_i, GDP_i, RINT_i, (FDi_i \times GDP_i), GFCF_i, GCF_i, CPI_i, POP_i] \quad (2)$$

subsequently equations (1) and (2) reshaped in the regression form and has been transformed in to the natural logarithmic form in order to assess the growth effect of financial development on the globalization as illustrated in equations (3) and (4):

$$\ln GLO_i = \beta_0 + \beta_1 \ln FDI_i + \beta_2 \ln CV + \varepsilon_i \quad (3)$$

$$\ln GLO_i = \beta_0 + \beta_1 \ln FDI_i + \beta_2 (\ln FDI_i \times \ln GDP_i) + \beta_3 \ln CV + \varepsilon_i \quad (4)$$

where in equations (3) and (4) $\ln GLO$ demonstrates natural logarithmic form of economic, political and social globalization indices. $\ln FD$ is natural logarithmic form of financial development index and $\ln CV$ is natural logarithmic form of previously mentioned control variables. Real interest rates panel values have been kept in absolute figures due to negative values in the data.

4.3 Data

The data used in this thesis are on annual basis and ranges from 1980 to 2014. Globally, 181 countries were selected for the panel study (check Appendix Table 3 for list of the countries). In the order of the regression equation; the selected data were gathered from three different sources:

Firstly; the data for globalization indices used as independent variables spawned by KOF globalization index. Economic (GLOE), political (GLOP) and social (GLOS) globalization was initiated by Dreher (2006) and the revised by Dreher et al. (2008). The multivariate indices of globalization are provided by Swiss Economic Institute – Konjunkturforschungsstelle on annual base. Table 1 in the Appendix provides essential information for these indices as they are commonly used in Dreher (2006), Dreher et al. (2008), Javid and Katircioglu (2017) and Shahbaz et al. (2018).

Secondly, financial development index (FDi) is the multifactorial index developed by Čihák et al. (2012) and Svirydzenka, K. (2016). Appendix Table 2 shows the listed weights for this complex multidimensional index.

Thirdly, Gross domestic product (constant 2010, US\$) (GDP), real interest rate (RINT), gross fixed capital formation (constant 2010, US\$) (GFCF), gross capital formation (constant 2010, US\$) (GCF), consumer price index (2010 = 100) (CPI), and overall population (POP) were added as control variables into models. The data has been obtained from World Bank Indicators (2019), provided by World Bank.

Correlation coefficients displayed in Table 13 that presents a moderate to high correlations marking that regressors in equations (3) and (4) are expected to have significant effects on globalization indicators.

Table 13: Correlation Coefficients

	<i>lnGLOE</i>	<i>lnGLOP</i>	<i>lnGLOS</i>	<i>lnFD</i>	<i>lnGDP</i>	<i>RINT</i>	$\frac{\ln FD}{\ln GDP}$	<i>lnGFCF</i>	<i>lnGCF</i>	<i>lnCPI</i>	<i>lnPOP</i>
<i>lnGLOE</i>	1.000										
<i>lnGLOP</i>	0.333	1.000									
<i>lnGLOS</i>	0.805	0.406	1.000								
<i>lnFD</i>	0.615	0.470	0.791	1.000							
<i>lnGDP</i>	0.314	0.677	0.455	0.652	1.000						
<i>RINT</i>	0.004	-0.022	-0.040	-0.093	-0.095	1.000					
$\frac{\ln FD}{\ln GDP}$	0.633	0.415	0.798	0.991	0.573	-0.086	1.000				
<i>lnGFCF</i>	0.342	0.659	0.477	0.672	0.987	-0.093	0.595	1.000			
<i>lnGCF</i>	0.339	0.656	0.477	0.673	0.983	-0.097	0.596	0.997	1.000		
<i>lnCPI</i>	0.375	0.175	0.319	0.209	0.021	0.105	0.240	0.050	0.062	1.000	
<i>lnPOP</i>	-0.241	0.491	-0.217	0.064	0.694	-0.038	-0.022	0.664	0.662	-0.111	1.000

4.4 Unit Root Test

In order to inspect existence of unit roots in the panel series four different tests used Levin, Lin and Chu – LLC (Levin et al, 2002), Im, Pesaran and Shin (IPS) (Im et al, 2003), the Fisher tests; Augmented Dickey-Fuller (ADF) and Phillips Perron (Choi, 2001) have been used to test stationary nature of panel series.

Table 14: Panel Unit Root Test

Variables	LLC	IPS	ADF	P.P.	Variables	LLC	IPS	ADF	P.P.
GLOE					FD x GDP				
t_T	0.70	3.22	279.32	232.23	t_T	-0.46	-2.07	457.24*	439.21*
t_m	-7.21*	2.35	315.27	353.69	t_m	-5.69*	-2.58*	419.86	467.84*
t	-	-	27.99	25.67	t	-	-	644.55*	892.92*
GLOP					GFCF				
t_T	-13.20*	-12.40*	1042.33*	1112.82*	t_T	-4.64*	-2.70*	399.95*	295.86
t_m	-10.13*	-4.83*	655.46*	675.37*	t_m	-0.79	5.92	194.37	167.18
t	12.20	-	35.93	24.46	t	-	-	37.76	33.96
GLOS					GCF				
t_T	0.21	4.12	332.67	263.52	t_T	-3.64*	-2.27	383.99*	339.45
t_m	-5.93*	3.24	349.62	447.34*	t_m	0.62	5.96	193.96	195.39
t	13.80	-	53.94	45.41	t	-	-	44.30	43.62
FD					CPI				
t_T	-3.40*	-1.92	450.67*	389.18	t_T	-31.60*	-15.97*	1506.92*	4155.39*
t_m	-6.46*	-1.01	389.93	435.00*	t_m	-25.89*	-18.55*	1555.86*	2288.90*
t	-12.02*	-	721.80*	960.84*	t	-	-	73.24	62.90
GDP					POP				
t_T	-5.72*	-0.46	518.77*	355.69	t_T	-4.58*	-8.79*	979.57*	426.67
t_m	1.11	15.36	254.11	316.53	t_m	-6.81*	1.19	632.36*	1508.06*
t	-	-	13.34	11.16	t	6.90	-	175.34	90.27
RINT									
t_T	-245.53*	-45.51*	1679.05*	2462.11*					
t_m	-441.09*	-94.19*	1432.57*	1630.30*					
t	-246.86*	-	1439.43*	1703.54*					

* denotes rejection of the null hypothesis existence of unit root at the 1%.

τ_T symbolizes the model with a drift and trend

τ_μ symbolizes the model with a drift and no trend

τ symbolizes model with no drift and trend

4.5 Results

Panel unit root test results in table 14 shows that all panel series are stationary at their level forms. Consequently, equations (3) and (4) now can be estimated using Fully Modified Ordinary Least Squares (FMOLS) approach.

Tables 15, 16 and 17 show the regression results where economic, social and political globalization stated as dependent variables respectively. FMOLS approach used to estimate the growth effect of globalization panels.

Firstly, financial development (FDi) and economic globalization (GLOE) exerts mixed significant results in Table 15. The FMOLS regression outcome shows that FDi has negative significant effect on economic globalization (GLOE) in main model; with no constant and no trend. Yet, the approach with constant deploys significant and positive result. The model with no constant and no trend may provide misleading results (Gujarati, 2009). To endorse that in-sample errors are unbiased, the methods with constant; and with constant and trend will be generally considered on interpretation of the results. This will lead to the best fit of the regression model.

In the model with moderation, significant coefficients have been found in no constant method, the method with constant did not exert any significant values for FDi and GLOE relationship. Additionally, gross domestic product (GDP), real interest rate (RINT), and consumer price index (CPI) has a significant positive impact on the GLOE in both models.

Secondly, Table 16 displays the regression coefficients where political globalization is dependent variable. Main model exerts positive significant relationship between FDi and GLOP. Moreover, the model with moderation ($\ln\text{FDi}_{\ln\text{GDP}}$) shows positive significant relationship with constant method and negative significant relationship in case of method of with constant and trend. Moreover, regression result indicates that CPI and population have positive significant impact on political globalization.

Lastly, Table 17 reveals that FDi has positive influence on social globalization (GLOS) in the main method. Counter wise, model with moderation reveals an inverse relationship between financial development and GLOS.

Table 15: Economic Globalization Regression Results

Dependent Variable: <i>lnGLOE</i>												
Independent Variables	Main Effects						Interaction Effects					
	None	<i>prob.</i>	With Constant	<i>prob.</i>	With Trend	<i>prob.</i>	None	<i>prob.</i>	With Constant	<i>prob.</i>	With Trend	<i>prob.</i>
<i>lnFDi</i>	-0.210***	0.000	0.060***	0.005	-	-	-1.455***	0.000	0.280	0.139	-	-
<i>lnGDP</i>	0.398***	0.000	0.187***	0.000	-	-	0.341***	0.000	0.181***	0.000	-	-
RINT	0.002*	0.064	0.000	0.573	-	-	0.002**	0.049	0.000	0.704	-	-
<i>lnGFCF</i>	0.008	0.908	0.025	0.514	-	-	-0.013	0.847	0.030	0.443	-	-
<i>lnGFC</i>	-0.113*	0.073	0.024	0.466	-	-	-0.052	0.377	0.017	0.606	-	-
<i>lnCPI</i>	0.088***	0.000	0.029***	0.000	-	-	0.068***	0.000	0.029***	0.000	-	-
<i>lnPOP</i>	-0.256***	0.000	0.200***	0.000	-	-	-0.208***	0.000	0.192***	0.001	-	-
<i>lnFDi x lnGDP</i>	-	-	-	-	-	-	0.058***	0.000	-0.009	0.245	-	-
R ²	0.415		0.893				0.502		0.892			
Adj. R ²	0.414		0.887				0.501		0.887			
S.E. of Reg.	0.293		0.128				0.270		0.129			
Long run var.	0.338		0.055				0.289		0.056			

*, ** and *** symbolizes the statistical significance at 10%, 5% and 1% respectively.

Table 16: Political Globalization Regression Results

Dependent Variable: <i>lnGLOP</i>												
Independent Variables	Main Effects						Interaction Effects					
	None	<i>prob.</i>	With Constant	<i>prob.</i>	With Trend	<i>prob.</i>	None	<i>prob.</i>	With Constant	<i>prob.</i>	With Trend	<i>prob.</i>
<i>lnFDi</i>	0.003	0.864	0.113***	0.000	0.082***	0.000	-0.225*	0.092	0.616***	0.001	-0.545**	0.028
<i>lnGDP</i>	0.257***	0.000	0.127***	0.000	-0.005	0.910	0.242***	0.000	0.102***	0.001	0.035	0.453
RINT	0.002**	0.048	0.001**	0.023	0.000	0.217	0.002*	0.053	0.001*	0.059	0.000	0.204
<i>lnGFCF</i>	-0.120	0.134	0.005	0.899	-0.064**	0.049	-0.124	0.125	0.020	0.605	-0.065*	0.050
<i>lnGFC</i>	-0.023	0.747	0.023	0.472	0.076***	0.006	-0.009	0.903	0.006	0.862	0.074***	0.008
<i>lnCPI</i>	0.051***	0.000	0.007*	0.089	0.004	0.311	0.046***	0.000	0.008*	0.052	0.003	0.464
<i>lnPOP</i>	0.054***	0.000	0.420***	0.000	0.584***	0.000	0.067***	0.000	0.412***	0.000	0.615***	0.000
<i>lnFDi x lnGDP</i>	-	-	-	-	-	-	0.011*	0.067	-0.020***	0.006	0.026***	0.011
R ²	0.382		0.909		0.956		0.385		0.910		0.956	
Adj. R ²	0.381		0.905		0.951		0.384		0.905		0.951	
S.E. of Reg.	0.361		0.142		0.101		0.361		0.142		0.102	
Long run var.	0.431		0.054		0.020		0.435		0.054		0.021	

Table 17: Social Globalization Regression Results

Dependent Variable: <i>lnGLOS</i>												
Independent Variables	Main Effects						Interaction Effects					
	None	<i>prob.</i>	With Constant	<i>prob.</i>	With Trend	<i>prob.</i>	None	<i>prob.</i>	With Constant	<i>prob.</i>	With Trend	<i>prob.</i>
<i>lnFDi</i>	0.003	0.824	0.235***	0.000	0.112***	0.000	-0.880***	0.000	-0.442**	0.014	-0.655***	0.006
<i>lnGDP</i>	0.493***	0.000	0.144***	0.000	0.026	0.530	0.442***	0.000	0.177***	0.000	0.077*	0.086
RINT	0.002*	0.066	0.000	0.685	0.001***	0.000	0.001*	0.094	0.000	0.366	0.001***	0.000
<i>lnGFCF</i>	-0.324***	0.000	-0.020	0.594	-0.073**	0.021	-0.324***	0.000	-0.040	0.292	-0.073**	0.021
<i>lnGFC</i>	0.156***	0.006	0.034	0.282	0.102***	0.000	0.196***	0.000	0.059*	0.066	0.098***	0.000
<i>lnCPI</i>	0.083***	0.000	0.027***	0.000	0.013***	0.001	0.068***	0.000	0.025***	0.000	0.012***	0.004
<i>lnPOP</i>	-0.304***	0.000	0.277***	0.000	0.209	0.179	-0.270***	0.000	0.288***	0.000	0.238	0.132
<i>lnFDi x lnGDP</i>	-	-	-	-	-	-	0.041***	0.000	0.026***	0.000	0.031***	0.001
R ²	0.746		0.942		0.976		0.762		0.943		0.976	
Adj. R ²	0.745		0.939		0.973		0.761		0.940		0.973	
S.E. of Reg.	0.277		0.136		0.090		0.268		0.135		0.090	
Long run var.	0.278		0.053		0.019		0.255		0.054		0.019	

*, ** and *** symbolizes the statistical significance at 10%, 5% and 1% respectively.

4.6 Conclusion

In this part of the study the relationship between financial development and major three globalization indices (economic globalization, political globalization and social globalization) examined with the interaction effect for globally selected 181 states for 35 years of span from 1980 to 2014. FMOLS method was used to analyze the effects of financial development on globalization.

The regression results showed that financial development has a significant positive effect on economic globalization. Additionally; GDP, RINT, and CPI has also significant positive impact on the economic globalization in both main and moderating models. On the other hand, results showed that financial development has positive significant impact on both political globalization and social globalization in the listed countries.

Furthermore, referring to regression results it was depicted that control variables as GDP, RINT and CPI mostly have a positive significant effect on economic, political and social globalization in main and interaction models.

In summary, the current thesis aimed to investigate the impact of financial development on three different aspects of globalization in a global scale. Using a new approach direct and interaction effects of the relationship have been studied.

Chapter 5

CONCLUSIONS

Firstly, in chapter three, this thesis examined the relationship between financial development and globalization using the global panel data set. Annual data that ranges from 1980 to 2014 has been used for globally selected 181 countries. Panel econometric methods used in this thesis expose that improvement in international financial markets generally impact positively general on economic, political, and social globalization; as anticipated by the KOF classification criteria. However, when macroeconomic fundamentals enter into the model such as national income, inflation, capital, and population growth this effect sometimes becomes negative subject on the type of macroeconomic factor and methodology used. This thesis concludes at the end that financial development is significant driver for globalization all the selected countries.

Secondly in chapter four, the study investigated the moderating role of economic growth on the financial development and globalization nexus. The results reveal that financial development has a significant positive impact on economic globalization. In addition to major effect, gross domestic product, interest rates, and inflation may have also positive significant impact on the economic globalization in main and moderating models. Political globalization is positively affected by the growth in financial development. Lastly, global financial development has a positive effect on

the social globalization. However, model with moderating role has an inverse relationship between financial development and GLOS.

Moreover, gross domestic product, interest rates and inflation generally have a significant positive impact on the all three studied types of globalization in both models.

Consequently, to assess the permanency of this approach, related and additional research can be conducted for further comparison in other countries or regions with different methods and variables.

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APPENDIX

Table 1. The KOF Globalization Index

Index Type and Criteria	Weights
A. Economic Globalization	[36%]
i) <i>Actual Flows</i>	(50%)
Trade (percent of GDP)	(22%)
Foreign Direct Investment, stocks (percent of GDP)	(27%)
Portfolio Investment (percent of GDP)	(24%)
Income Payments to Foreign Nationals (percent of GDP)	(27%)
ii) <i>Restrictions</i>	(50%)
Hidden Import Barriers	(24%)
Mean Tariff Rate	(28%)
Taxes on International Trade (percent of current revenue)	(26%)
Capital Account Restrictions	(23%)
B. Social Globalization	[38%]
i) <i>Data on Personal Contact</i>	(33%)
Telephone Traffic	(25%)
Transfers (percent of GDP)	(3%)
International Tourism	(26%)
Foreign Population (percent of total population)	(21%)
International Letters (per capita)	(25%)
ii) <i>Data on Information Flows</i>	(35%)
Internet Users (per 1,000 people)	(36%)
Television (per 1,000 people)	(38%)
Trade in Newspapers (percent of GDP)	(26%)
iii) <i>Data on Cultural Proximity</i>	(32%)
Number of McDonald's Restaurants (per capita)	(44%)
Number of Ikea stores (per capita)	(44%)
Trade in books (percent of GDP)	(11%)
C. Political Globalization	[26%]
Embassies in the Country	(25%)
Membership in International Organizations	(27%)
Participation in U.N. Security Council Missions	(22%)
International Treaties	(26%)

Source: Dreher et al. (2008), Dreher (2006).

Table 2. Summary Statistics for Financial Development Index Pyramid

Code	Name	Obs	Mean	Median	St.Dev	Min	Max
Financial Institutions Depth							
FID1	Private sector credit to GDP	5,328	43	30	39	0.30	319
FID2	Pension fund assets to GDP	942	20	8	28	0.00	157
FID3	Mutual fund assets to GDP	972	87	10	519	0.00	5,232
FID4	Insurance premiums (life + non-life) to GDP	3,371	3	2	3	0.01	18
Financial Institutions Access							
FIA1	Bank branches per 100,000 adults	1,722	18	13	18	0.13	98
FIA2	ATMs per 100,000 adults	1,516	40	28	43	0.01	290
Financial Institutions Efficiency							
FIE1	Net interest margin	3,391	5	4	4	0.02	44
FIE2	Lending-deposits spread	4,750	8	6	8	0.03	92
FIE3	Non-interest income to total income	3,527	39	37	16	0.01	100
FIE4	Overhead costs to total assets	3,419	4	3	3	0.04	48
FIE5	Return on assets	3,434	1	1	3	-109	21
FIE6	Return on equity	3,422	12	14	45	-1,792	192
Financial Markets Depth							
FMD1	Stock market capitalization to GDP	2,517	45	26	57	0.000	549
FMD2	Stocks traded to GDP	2,312	28	5	58	0.000	756
FMD3	International debt securities of government to GDP	1,564	8	4	10	0.003	98
FMD4	Total debt securities of financial corporation to GDP	1,751	25	3	103	0.000	1,912
FMD5	Total debt securities of nonfinancial corporation to GDP	2,229	15	6	25	0.000	341
Financial Markets Access							
FMA1	Percent of market capitalization outside of top 10 largest companies	669	55	53	19	14	99
FMA2	Total number of issuers of debt per 100,000 adults	1,804	0.3	0.1	0.6	0.00	8
Financial Markets Efficiency							
FME1	Stock market turnover ratio (stocks traded/capitalization)	5,984	0.16	0.00	0.28	0.00	1.00

Source: Cihak, M., et al. (2012).

Table 3: List of countries used for estimation in study

Albania	Georgia	Norway
Algeria	Germany	Oman
Angola	Ghana	Pakistan
Antigua and Barbuda	Greece	Panama
Argentina	Grenada	Papua New Guinea
Armenia	Guatemala	Paraguay
Aruba	Guinea	Peru
Australia	Guinea-Bissau	Philippines
Austria	Guyana	Poland
Azerbaijan	Haiti	Portugal
Bahamas, The	Honduras	Qatar
Bahrain	Hungary	Romania
Bangladesh	Iceland	Russian Federation
Barbados	India	Rwanda
Belarus	Indonesia	Samoa
Belgium	Iran, Islamic Rep.	Sao Tome and Principe
Belize	Ireland	Saudi Arabia
Benin	Israel	Senegal
Bhutan	Italy	Serbia
Bolivia	Jamaica	Seychelles
Bosnia and Herzegovina	Japan	Sierra Leone
Botswana	Jordan	Singapore
Brazil	Kazakhstan	Slovak Republic
Brunei Darussalam	Kenya	Slovenia
Bulgaria	Kiribati	Solomon Islands
Burkina Faso	Korea, Rep.	South Africa
Burundi	Kuwait	Spain
Cabo Verde	Kyrgyz Republic	Sri Lanka
Cambodia	Lao PDR	St. Kitts and Nevis
Cameroon	Latvia	St. Lucia
Canada	Lebanon	St. Vincent and the Grenadines
Central African Republic	Lesotho	Sudan
Chad	Liberia	Suriname
Chile	Libya	Swaziland
China	Lithuania	Sweden
Colombia	Luxembourg	Switzerland
Comoros	Macao SAR, China	Syrian Arab Republic
Congo, Dem. Rep.	Macedonia, FYR	Tajikistan
Congo, Rep.	Madagascar	Tanzania
Costa Rica	Malawi	Thailand
Cote d'Ivoire	Malaysia	Timor-Leste
Croatia	Maldives	Togo
Cyprus	Mali	Tonga
Czech Republic	Malta	Trinidad and Tobago
Denmark	Marshall Islands	Tunisia
Djibouti	Mauritania	Turkey
Dominica	Mauritius	Turkmenistan
Dominican Republic	Mexico	Uganda
Ecuador	Micronesia, Fed. Sts.	Ukraine
Egypt, Arab Rep.	Moldova	United Arab Emirates
El Salvador	Mongolia	United Kingdom
Equatorial Guinea	Morocco	United States
Eritrea	Mozambique	Uruguay
Estonia	Myanmar	Uzbekistan
Ethiopia	Namibia	Vanuatu
Fiji	Nepal	Venezuela, RB
Finland	Netherlands	Vietnam
France	New Zealand	Yemen, Rep.
French Polynesia	Nicaragua	Zambia
Gabon	Niger	
Gambia, The	Nigeria	